



Parcel B TPH Combined Site

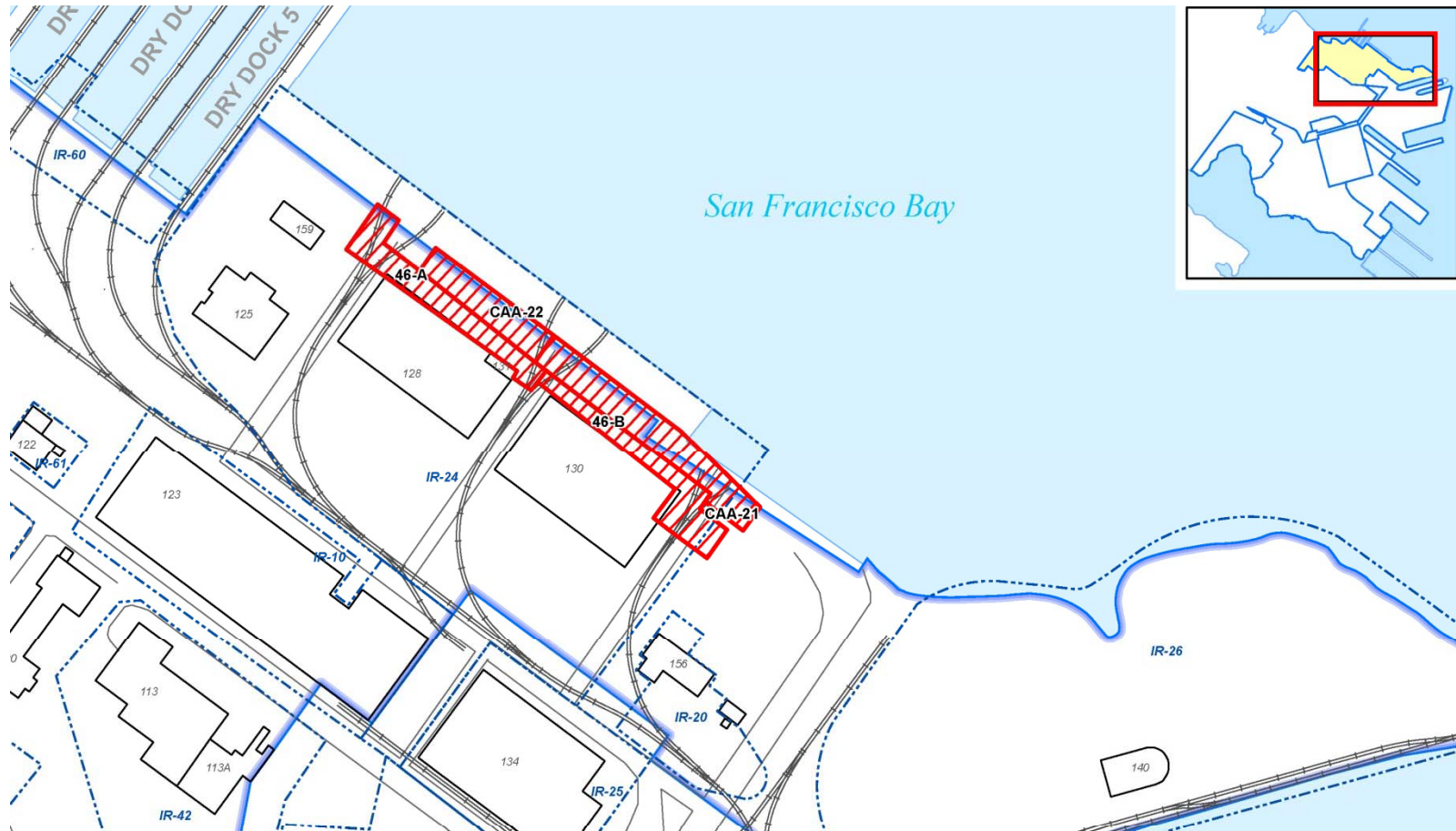


Deep Soil Data Gaps Investigation Combined Site (CAA-21/22 AOC & 46-A/B) Parcel B

Base Closure Team Meeting
Hunters Point Naval Shipyard
December 6, 2012



Combined Site Location Map





Site Background



- Large-scale soil removal actions conducted in 1999 – 2001, and again in 2004 resulted in the excavation of the upper 10 to 13 feet of soil within almost all of the Combined Site boundaries.
- During the NAPL Removal action conducted in late 2010 to early 2011, significant petroleum impacts were identified in soils deeper than 10 feet bgs.
- In particular, during installation of groundwater monitoring well IR24MW28A, designed as a post-NAPL removal action (2010) monitoring well, soil samples collected at depths below 10 feet contained Total TPH concentrations ranging from 3,500 to 9,300 mg/kg – exceeding the source criterion of 3,500 mg/kg established in the HPNS TPH Strategy.
- These concentrations were of particular concern as they occurred in the well closest to the Quay Wall Gap.





Change in Site Conditions



- During the time of the NAPL removal action and well installation (October 2010 to February 2011) safety considerations due to the deteriorated condition of the deck above the Wooden Quay Wall prevented access to the area between the Wooden Quay Wall and about 20 feet inland.
- Subsequent to the field activities, Piers B and C were removed in Spring 2011.
- The Pier C removal included removal of the deck above the Wooden Quay Wall. Thus the previously off-limits 20-foot wide area adjacent to the Wooden Quay Wall became accessible.



Purpose of Revetment Extension and TPH Deep Soil DGI



- Extension of shoreline revetment wall to Building 130 area in response to the removal of Piers B and C will address regulator concerns about long-term stability of the shoreline adjacent to TPH-impacted deep soil at the Combined Site.
- Additional deep soil data was needed to fully characterize residual hydrocarbon content of soils that will be disturbed by construction of the revetment, to allow for proper management to prevent the inadvertent release of impacted soils to San Francisco Bay, as well as to properly plan for handling of excavated soils, potential exposure to site workers, etc.



Deep Soil Data Gap Investigation



- September 18 through 20, 2012, the Navy installed eight (8) soil borings located adjacent to the Quay Wall as part of the Basewide Petroleum Program (not CERCLA).
- Seven soil samples between 10 and 30 feet bgs were collected from each soil boring and analyzed for TPH-Extractables (diesel, motor oil).
- Preliminary results indicate two of the 56 soil samples collected contained Total TPH above the source criterion (3,500 mg/kg).
- These samples were both collected at 12.5 to 13 feet bgs (within approximately +0.3 to -1.1 feet MSL) from borings IR24B31 (9,000 mg/kg) and IR24B32 (23,000 mg/kg) located near the southeast end of the concrete Quay Wall.
- Visible LNAPL was noted at 12.5 feet bgs on the boring log for IR24B32.

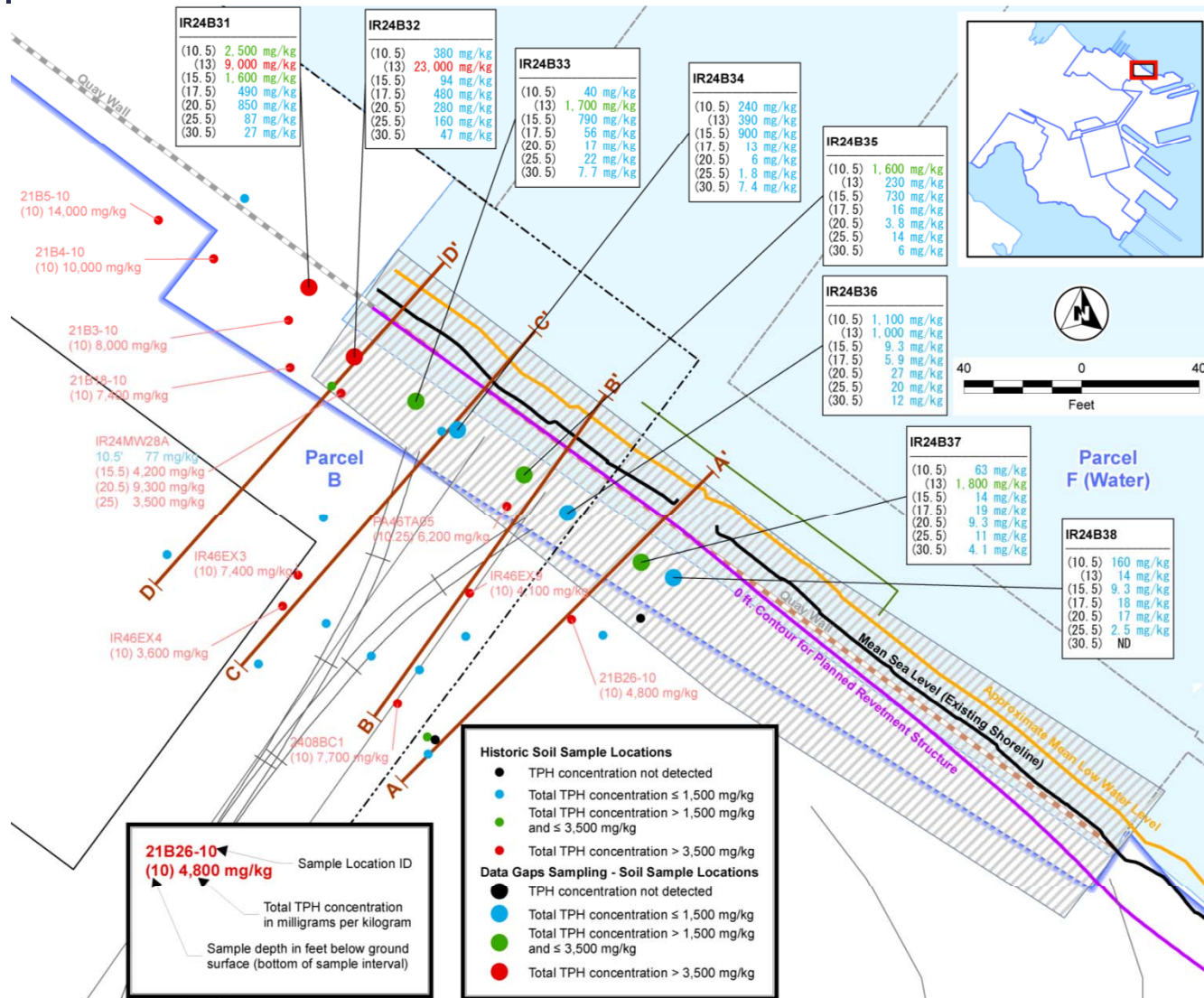


Direct-Push Drilling at IR24B32



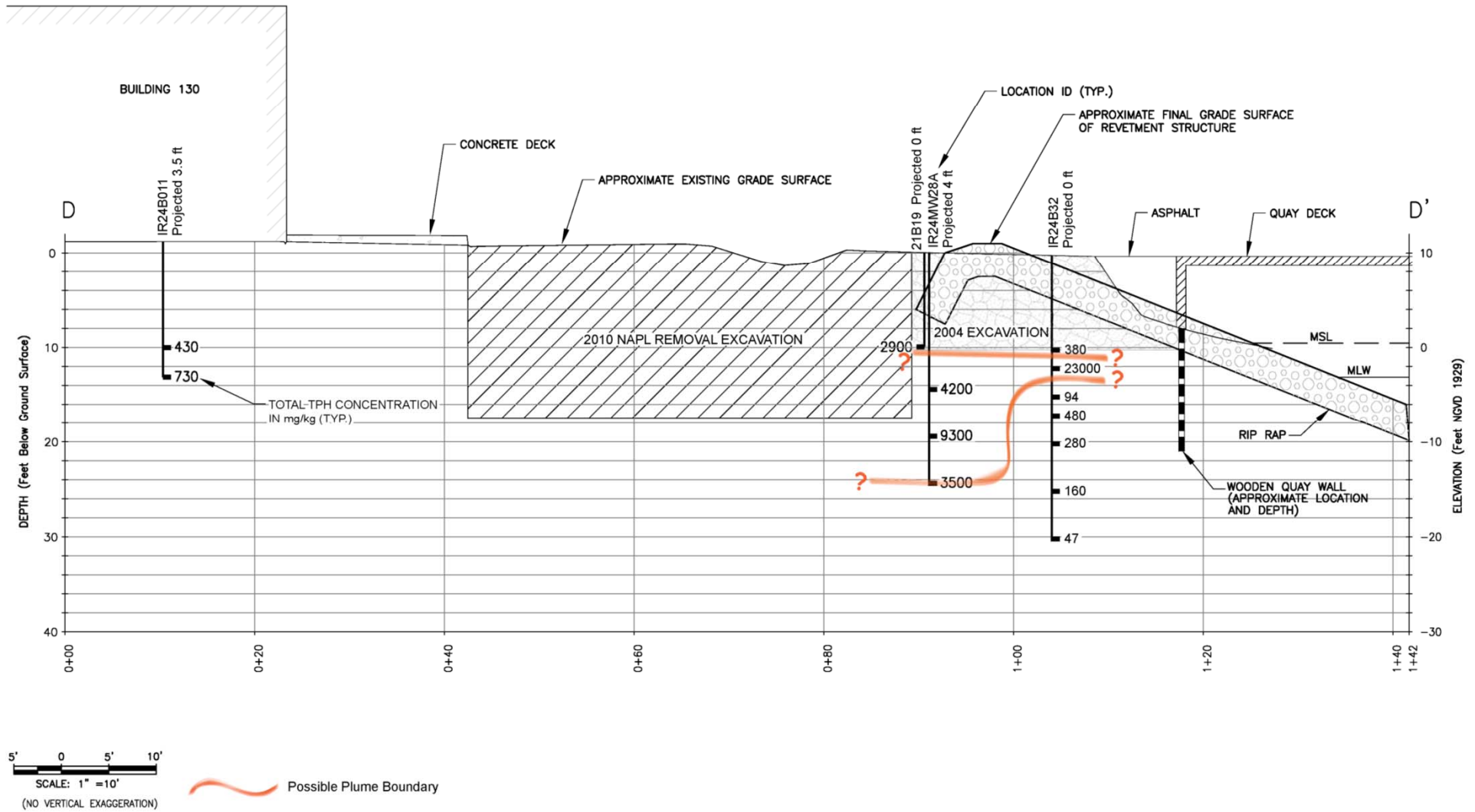


Deep Soil DGI Sample Location and Results



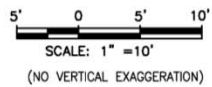
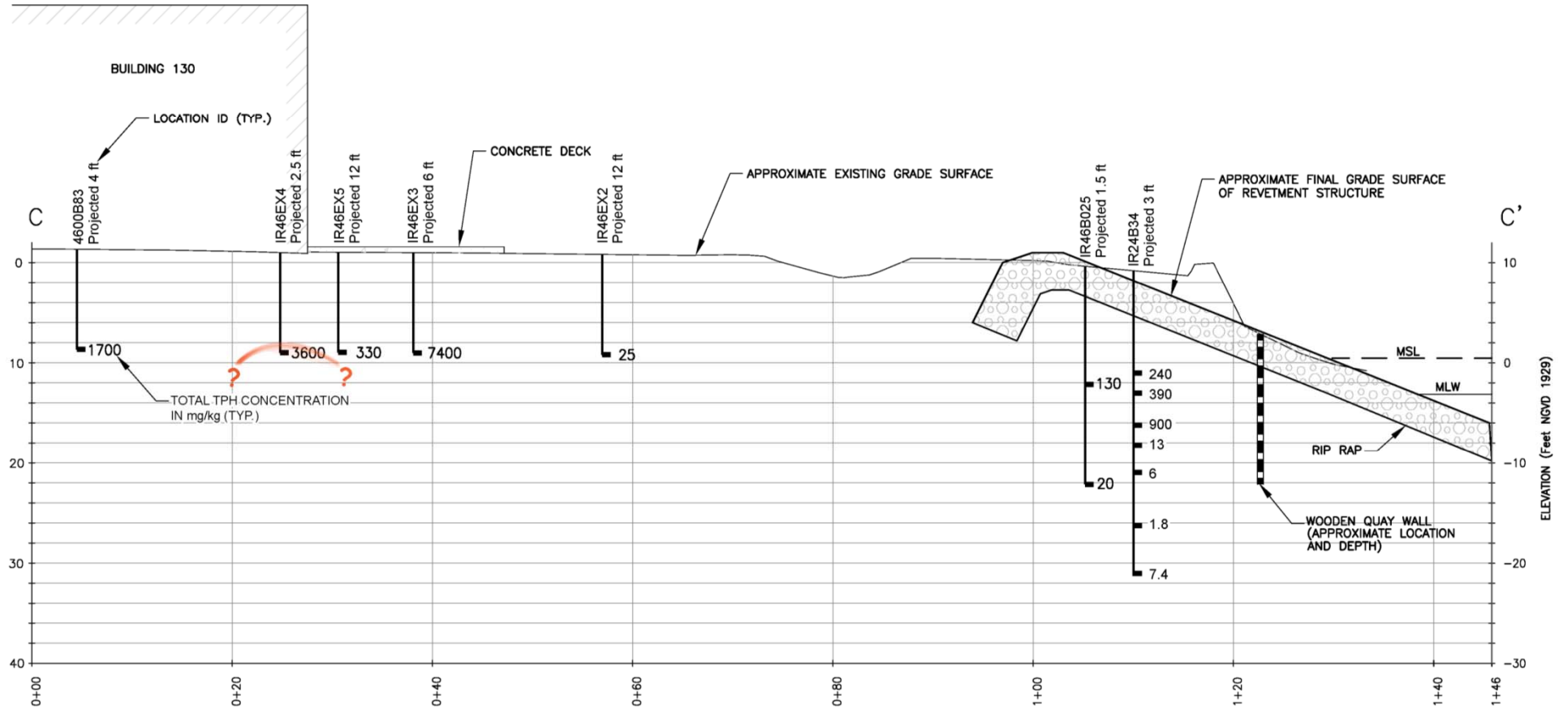


Cross Section D – D'





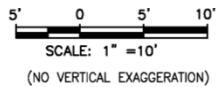
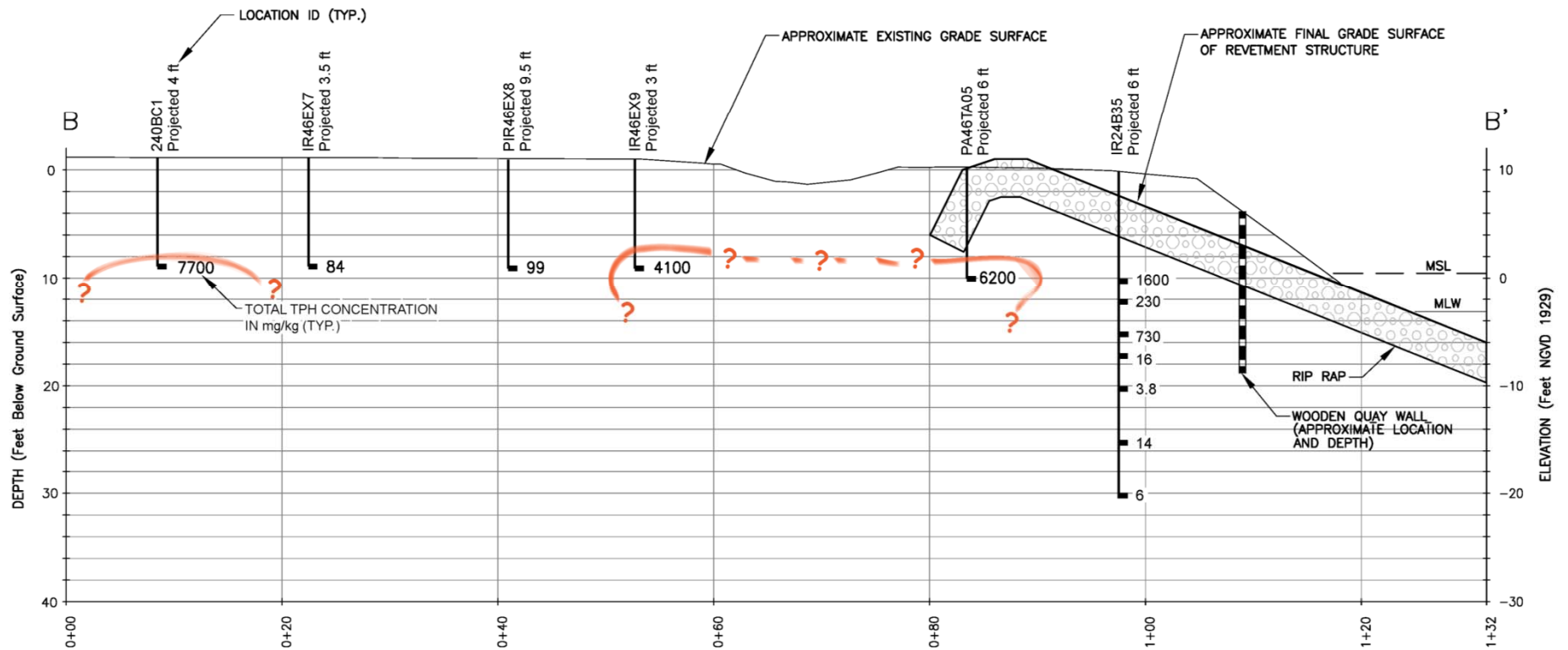
Cross Section C – C'



Possible Plume Boundary



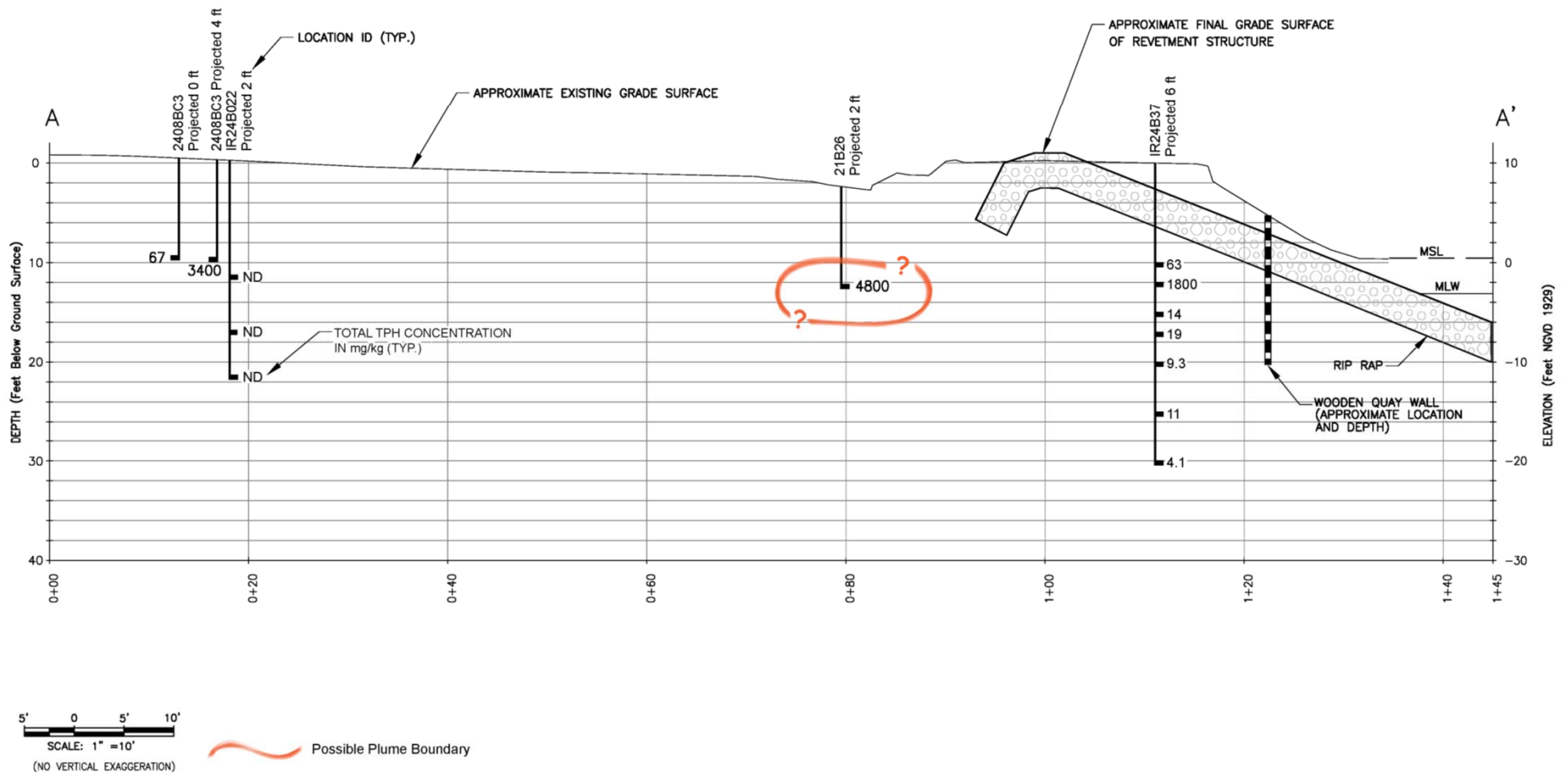
Cross Section B – B'



Possible Plume Boundary

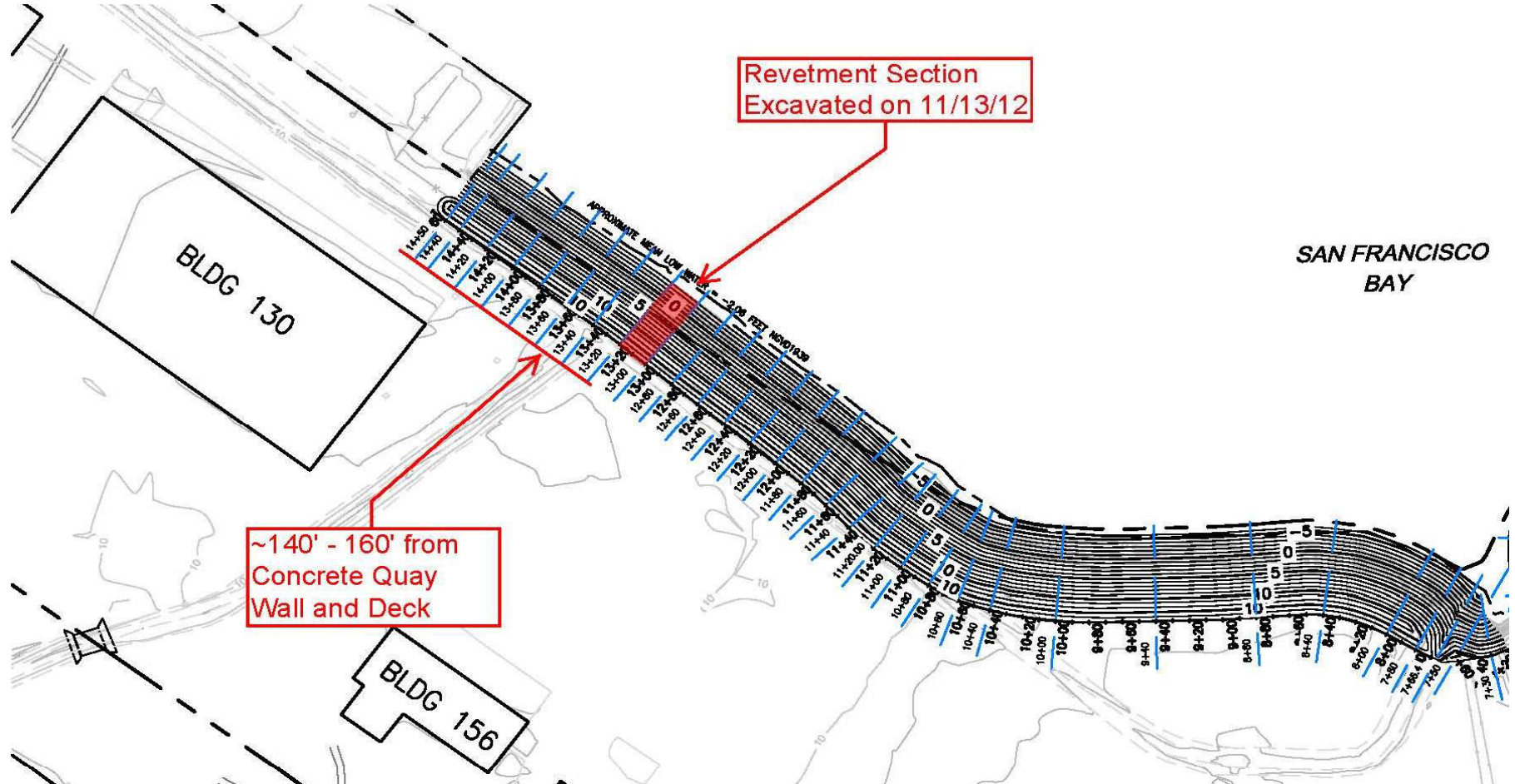


Cross Section A – A'



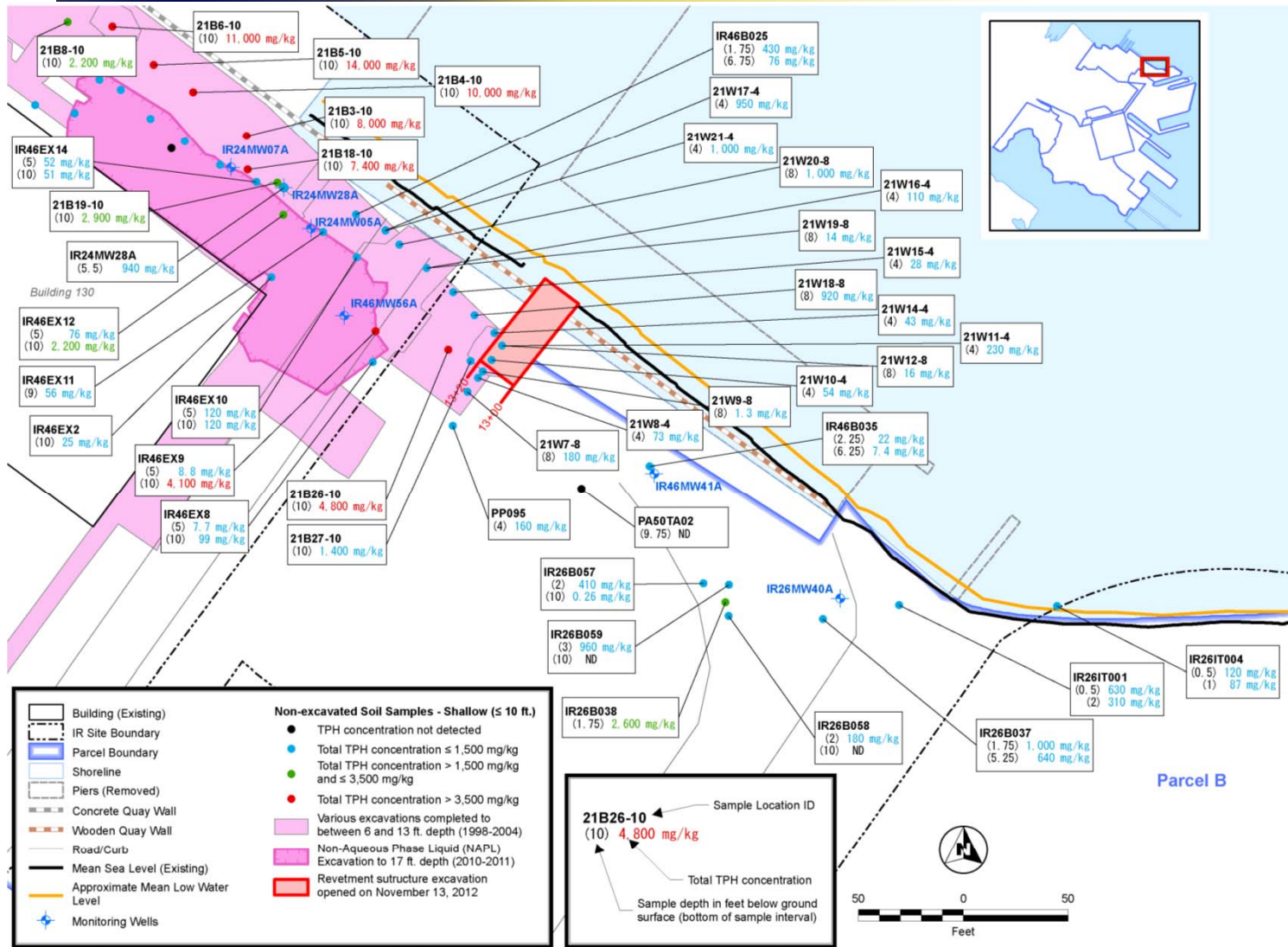


Revetment Excavation Between STA 1300+00 and STA 1320+00 (NAPL Discovery)



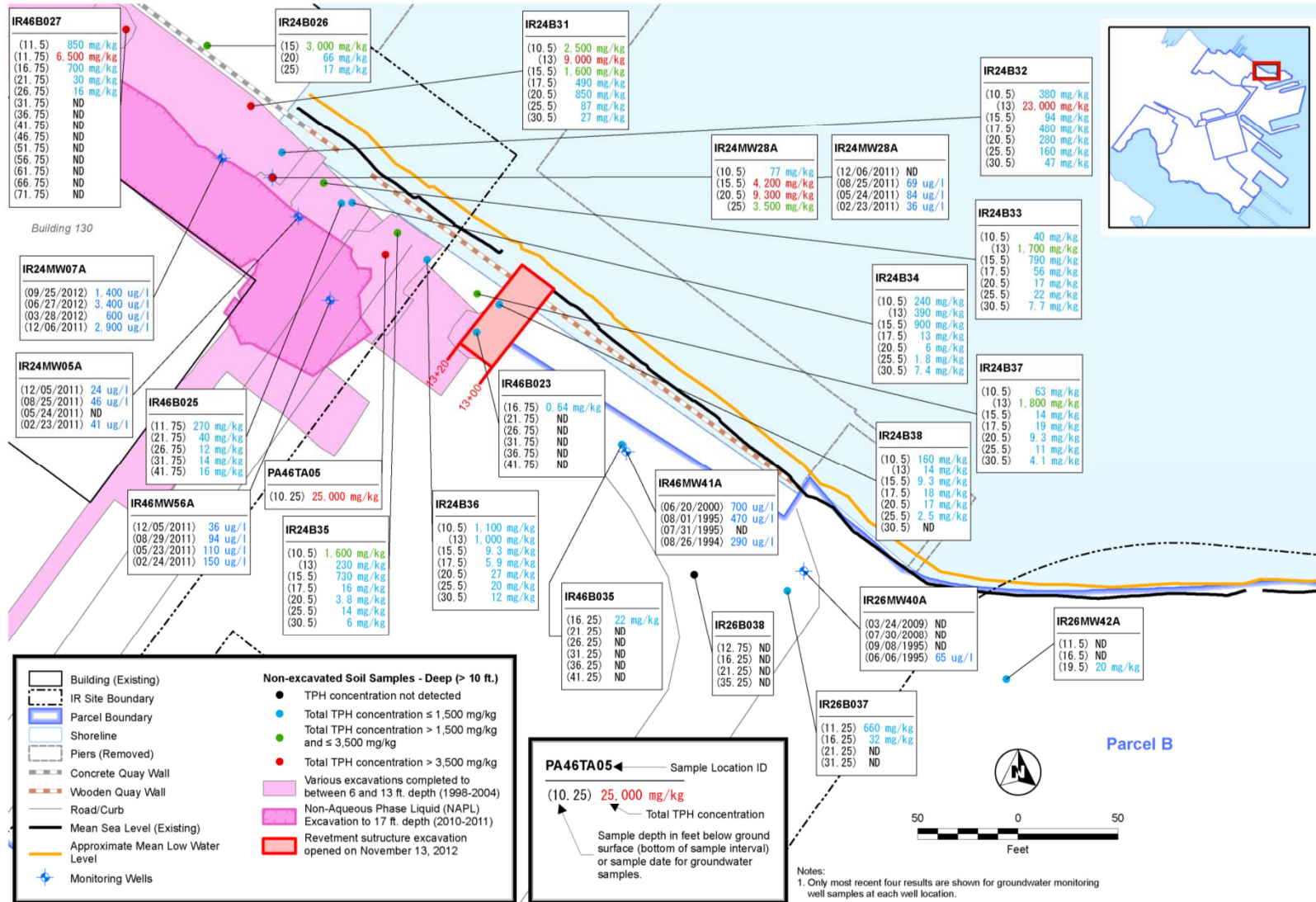


Maximum Total TPH Results in Shallow Soils (< 10 feet bgs)





Maximum Total TPH Results in Deep Soils (> 10 feet bgs)





Conclusions



- LNAPL is present in the vicinity of the southeastern end of the concrete Quay Wall at approximately Mean Sea Level.
- Residual LNAPL occurrence did not appear to extend to sediment below approximate MSL or at any elevation southeast of boring IR24B33 *on the landward side of the Wooden Quay Wall*.
- The two impacted soil samples were both collected at 12.5 feet bgs (approximately -1.0 to -1.5 MSL). In the impacted area delineated by IR24B31 and IR24B32, the toe of the planned revetment wall will extend to a depth of approximately 18 feet bgs (or approximately -8.0 feet below MSL).
- Concrete Quay Wall adjacent to IR24B31 is known to extend to a depth of 14.5 feet bgs.



Conclusions (continued)



- NAPL is also present along the shoreline between revetment stations 13+00 to 13+20. The exact distribution of NAPL along the Parcel B shoreline is currently unknown.
- Additional investigation is needed to fully delineate the extent of NAPL in near-shore sediments, as well as to determine the probable path of migration.
- Additional borings along the Parcel B shoreline may be completed as part of the ongoing Parcel F Radiological Data Gap Investigation (currently under Navy consideration).
- Additional soil/sediment data will be required to evaluate possible remedial responses to the presence of NAPL-contaminated sediments along the Parcel B shoreline.



Schedule



- Internal Draft Data Gap Summary Report: January 14, 2013
- Final Data Gap Summary Report: February 14, 2013